

Standard AIR CONTAMINANT DISCHARGE PERMIT REVIEW REPORT

Department of Environmental Quality
Northwest Region

Source Information:

SIC	3211
NAICS	327211

Source Categories (Table 1 Part, code)	B, 83
Public Notice Category	II

Compliance and Emissions Monitoring Requirements:

FCE	
Compliance schedule	
Unassigned emissions	
Emission credits	
Special Conditions	

Source test [date(s)]	
COMS	
CEMS	
Ambient monitoring	

Reporting Requirements

Annual report (due date)	15 Feb
Quarterly report (due dates)	

Monthly report (due dates)	
Excess emissions report	
Other (specify)	

Air Programs

Synthetic Minor (SM)	
SM -80	
NSPS (list subparts)	
NESHAP (list subparts)	61, N
Part 68 Risk Management	
CFC	

NSR	
PSD	
RACT	
TACT	x
Other (specify)	

TABLE OF CONTENTS

PERMITTING	3
SOURCE DESCRIPTION.....	3
COMPLIANCE.....	4
EMISSIONS	4
MAJOR SOURCE APPLICABILITY	5
ADDITIONAL REQUIREMENTS.....	6
PUBLIC NOTICE.....	6

PERMITTING

PERMITTING ACTION

1. The permit is for an existing Air Contaminant Discharge Permit (ACDP) which was issued on 8/6/04 and was originally scheduled to expire on 6/1/09. It is a Standard permit, as the permittee has chosen to retain the facility's baseline emission rates.
2. The renewal application was submitted on 3/18/09. In April 2009, Bullseye Glass requested from EPA a determination of whether the facility is subject to 40 CFR 61, Subpart N, National Emission Standards for Inorganic Arsenic Emissions from Glass Manufacturing. EPA's determination, as contained in a letter dated 7/27/2010, was that the Subpart is applicable to the Bulleye facility.

OTHER PERMITS

3. No other permits have been issued or are required by the Department of Environmental Quality for this source.

ATTAINMENT STATUS

4. The source is located in a maintenance area for CO and Ozone. NO_x and VOC are precursors to Ozone. The facility is an insignificant source of CO, NO_x and VOC. The area is in attainment for all other criteria pollutants.

SOURCE DESCRIPTION

OVERVIEW

5. The permittee manufactures flat, stained glass. The process includes mixing sand, soda lime, and crushed glass with dry coloring agents, moistening the mixture with water, melting the mixture in a tank furnace, and forming glass sheets. The sheets are cut to specified sizes. The facility was built in 1974.
6. In 2006, the process was changed to allow the infusion of liquid oxygen into the furnaces during the melting process in lieu of ambient air. This change in process lowered NO_x emissions by roughly 40% for each retrofitted furnace. The change is made to the various furnaces during scheduled downtime (once every two years).

PROCESS AND CONTROL DEVICES

7. Existing air contaminant sources at the facility consist of the following:
- A Torit baghouse collects PM emissions from the silos that feed into the batch room, installed 2000. Collected material is reused in the process.
 - 14 tank furnaces (1-9 and 11-15), natural gas fired with propane back-up; cumulative operating capacity of 885 lb/hr and 2,700 ton/yr, 16,625 ft³/hr.
 - 2 pot furnaces (10 & 17), natural gas fired with propane back-up; cumulative operating capacity of 35 lb/hr and 100 ton/yr, 475 ft³/hr
 - New capacity is expected from the installation of new furnaces (18-20) or expanding the existing capacity of existing equipment. Anticipated cumulative capacity is 115 lb/hr and 350 ton/yr. This equipment will also be fired on natural gas with propane back-up and combust 3,800 ft³/hr.
 - Total fuel usage is estimated at 171 million ft³/yr.

COMPLIANCE

8. The facility was inspected on 9/14/05 and found to be out of compliance with the permit requirement to monitor the use of arsenic trioxide. The company responded to a Warning Letter by instituting procedures to monitor the use of arsenic trioxide monthly. No further action was deemed necessary. The facility was inspected on 8/16/10 and found to be in compliance with permit conditions.
9. During the prior permit period one complaint regarding the issuance of black smoke was recorded for this facility. A site visit on 9/13/07 revealed that the black smoke observed most likely came from a train. Train tracks run one block northwest of the plant. Emission exhaust points at the plant were observed during two batch processes; one for clear glass and one for red glass. No visible emissions were noted.

EMISSIONS

10. Proposed PSEL information:

Pollutant	Baseline Emission Rate (tons/yr)	Netting Basis		Plant Site Emission Limits (PSEL)		
		Previous (tons/yr)	Proposed (tons/yr)	Previous PSEL (tons/yr)	Proposed PSEL (tons/yr)	PSEL Increase (tons/yr)
PM ₁₀	0	1	0	14	14	0
SO ₂	0	1	0	39	39	0
NO _x	6	6	6	45	45	0

- a. The proposed PSELs for all pollutants except NO_x are equal to the Generic PSEL in accordance with OAR 340-216-0064(4)(b) and the netting basis is zero in accordance with OAR 340-222-0040(2). This change is a correction to the previous permit/review report. The facility's PTE for PM₁₀ and SO₂ are less than the Generic PSEL, thus the netting basis is zero.
- b. The PSEL for PM has been removed from the permit. Emissions from natural gas combustion and emissions from dry materials handling treated by a baghouse are PM₁₀.
- c. The PSEL for NO_x is equal to the netting basis plus the generic PSEL.
- d. For the 2009 production of 2,144 tons of glass melted, emissions of 1.8 tons PM, 1.7 tons PM₁₀, 2.7 tons SO₂, and 17.9 tons NO_x were reported.
- e. The PSEL is a federally enforceable limit on the potential to emit.

SIGNIFICANT EMISSION RATE ANALYSIS

11. For each pollutant, the proposed Plant Site Emission Limit is less than the Netting Basis plus the significant emission rate, thus no further air quality analysis is required.

MAJOR SOURCE APPLICABILITY

CRITERIA POLLUTANTS

12. A major source is a facility that has the potential to emit 100 tons/yr or more per year of any criteria pollutant. This facility is not a major source of criteria pollutant emissions.

HAZARDOUS AIR POLLUTANTS

13. A major source is a facility that has the potential to emit 10 tons/yr or more of any single HAP or 25 tons/yr or more of combined HAPs. This facility uses approximately 6,000 pounds of dry materials per year that contain HAP substances. Materials used at the facility may include arsenic trioxide, cadmium, selenium, chromium, and lead as coloring agents or to produce trade-mark characteristics in the glass. After the dry products are mixed, water is added to moisten a batch prior to firing. No data on the potential emissions through the furnace stack from these hydrated mixtures is available. Assuming that all of the material was released as PM, the facility would not have the potential to emit single or combined HAP at or above the major source threshold.

ADDITIONAL REQUIREMENTS

NSPS APPLICABILITY

14. 40 CFR Part 60, Subpart CC, New Source Performance Standards for Glass Manufacturing Plants, is not applicable to the source because the facility was constructed in 1974, prior to the June 15, 1979 subpart promulgation date.

NESHAPS/MACT APPLICABILITY

15. 40 CFR 63, Subpart SSSSSS, NESHAP for Glass Manufacturing Area Sources, is not applicable to this facility because the regulation applies only to continuous furnaces. Bullseye operates only periodic furnaces.
16. 40 CFR Part 61, Subpart N, National Emission Standards for Inorganic Arsenic Emissions from Glass Manufacturing, applies to a facility of any size existing prior to August 4, 1986. The limit for an uncontrolled source is 2.7 tons of arsenic emissions per year, based on mass balance. Bullseye reported the use of 825 pounds of arsenic in calendar year 2009.

RACT APPLICABILITY

17. The facility is located in the Portland AQMA, but it is not one of the listed source categories in OAR 340-232-0010, thus the RACT rules do not apply

TACT APPLICABILITY

18. The source is meeting the states TACT/Highest and Best Rules by collecting dry material fugitives in a baghouse and using water to moisten the mixture prior to firing.

PUBLIC NOTICE

19. Pursuant to OAR 340-216-0066(4)(a)(A), issuance of Standard Air Contaminant Discharge Permits require public notice in accordance with OAR 340-209-0030(3)(b), which requires that the Department provide notice of the proposed permit action and a minimum of 35 days for interested persons to submit written comments. **The public notice was mailed on April 15, 2011 and the comment period ended at 5 p.m., May 20, 2011. No comments were received during the comment period.**

ka:ggg
5/24/11

STANDARD
AIR CONTAMINANT DISCHARGE PERMIT

Department of Environmental Quality
Northwest Region
2020 SW 4th Avenue, #400
Portland, Oregon 97201
(503) 229-5554

This permit is being issued in accordance with the provisions of ORS 468A.040 and
based on the land use compatibility findings included in the permit record.

ISSUED TO:

Bullseye Glass Co.
3722 SE 21st Avenue
Portland, OR 97202

INFORMATION RELIED UPON:

Application No.: 023633
Date Received: 03/18/09
Additional information
received through 07/27/10

PLANT SITE LOCATION:

3722 SE 21st Avenue
Portland, OR 97202

LAND USE COMPATIBILITY FINDING:

Approving Authority: City of Portland
Approval Date: 03/11/97

ISSUED BY THE DEPARTMENT OF ENVIRONMENTAL QUALITY


Keith Johnson, Northwest Region Air Quality Manager

5/24/2011
Dated

Source(s) Permitted to Discharge Air Contaminants (OAR 340-216-0020):

Table 1 Code	Source Description	SIC / NAICS
Part B, 83	Problem for which an air quality concern is identified (stained flat glass manufacture)	3211 / 327211
C, 3	Source electing to maintain Baseline Emission Rate	n/a

TABLE OF CONTENTS

1.0	GENERAL EMISSION STANDARDS AND LIMITS	3
2.0	SPECIFIC PERFORMANCE AND EMISSION STANDARDS	3
3.0	PLANT SITE EMISSION LIMITS	4
4.0	COMPLIANCE DEMONSTRATION	4
5.0	RECORDKEEPING REQUIREMENTS	5
6.0	REPORTING REQUIREMENTS	5
7.0	PERMIT RENEWAL AND MODIFICATION	7
8.0	DEQ CONTACTS / ADDRESSES	7
9.0	FEES	8
10.0	GENERAL CONDITIONS AND DISCLAIMERS	9
11.0	ABBREVIATIONS, ACRONYMS, AND DEFINITIONS	11

1.0 GENERAL EMISSION STANDARDS AND LIMITS

- 1.1. **Visible Emissions** The permittee must ensure that emissions from any air contaminant source does not equal or exceed 20% opacity for a period aggregating more than 30 seconds in any one hour.
- 1.2. **Particulate Matter Emissions** The permittee must ensure that particulate matter emissions from any air contaminant source other than fugitive emission sources does not exceed 0.1 grains per standard cubic foot
- 1.3. **Fugitive Emissions** The permittee must take reasonable precautions to prevent fugitive dust emissions by:
- a. Operating all air contaminant-generating processes so that fugitive type dust associated with the operation will be adequately controlled at all times.
 - b. Storing collected materials from air pollution control equipment in a covered container or other method equally effective in preventing the material from becoming airborne during storage and transfer.
- 1.4. **Particulate Matter Fallout** The permittee must not cause or permit the emission of any particulate matter larger than 250 microns in size at sufficient duration or quantity, as to create an observable deposition upon the real property of another person. The Department will verify that the deposition exists and will notify the permittee that the deposition must be controlled.
- 1.5. **Nuisance and Odors** The permittee must not cause or allow air contaminants from any source to cause a nuisance. Nuisance conditions will be verified by Department personnel.

2.0 SPECIFIC PERFORMANCE AND EMISSION STANDARDS

- 2.1. **Inorganic Arsenic Usage** The permittee must ensure that arsenic emissions from each furnace do not exceed: existing (constructed prior to 8/4/1986) furnace do not exceed 2.7 tons per year
- a. 2.7 tons per year for furnaces constructed prior to 8/14/1986 (existing furnaces)
 - b. 0.44. tons per year for furnaces constructed or modified after 8/14/1986 (new furnaces)
 - c. The permittee must operate and maintain each furnace in a manner consistent with good air pollution control practice to minimize emissions at all times.

- d. Semi-annually, perform the calculations required in 40 CFR 61.164(c) to estimate uncontrolled plant-wide arsenic emissions.
- e. Record the occurrence and duration of all startups, shutdowns, and malfunctions of each furnace.

3.0 PLANT SITE EMISSION LIMITS

3.1. Plant Site Emission Limits (PSEL)

Plant site emissions must not exceed the following:

Pollutant	Limit	Units
PM ₁₀	14	tons per year
SO ₂	39	tons per year
NO _x	39	tons per year

- 3.2. Annual Period The annual plant site emissions limits apply to any 12-consecutive calendar month period.

4.0 COMPLIANCE DEMONSTRATION

- 4.1. PSEL Compliance Monitoring Compliance with the PSEL is determined for each 12-consecutive calendar month period based on the following calculation for each pollutant:

$$E = \Sigma(EF \times P)/2000 \text{ lbs}$$

where,

$$\begin{aligned} E &= \text{pollutant emissions (ton/yr);} \\ EF &= \text{pollutant emission factor (Condition 4.2);} \\ P &= \text{process production (glass melted)} \end{aligned}$$

- 4.2. Emission Factors The permittee must use the default emission factors provided in here for calculating pollutant emissions, unless alternative emission factors are approved by the Department. The permittee may request or the Department may require using alternative emission factors provided they are based on actual test data or other documentation (e.g., AP-42 compilation of emission factors) that has been reviewed and approved by the Department.

1.9 lb PM₁₀/ton glass melted
 3.0 lb SO₂/ton glass melted
 11.9 lb NO_x/ton glass melted for oxygen-fed furnaces
 19.8 lb NO_x/ton glass melted for unconverted furnaces

5.0 RECORDKEEPING REQUIREMENTS

- 5.1. Operation and Maintenance** The permittee must maintain the following records related to the operation and maintenance of the plant and associated air contaminant control devices:
- a. Tons of glass melted, monthly;
 - b. Types and quantities of glass containing arsenic, annually;
 - c. Emissions calculations required in Condition 4.1, monthly;
 - d. Semi-annual emissions calculation required in Condition 2.1, annually
- 5.2. Excess Emissions** The permittee must maintain records of excess emissions as defined in OAR 340-214-0300 through 340-214-0340 (recorded on occurrence). Typically, excess emissions are caused by process upsets, startups, shutdowns, or scheduled maintenance. In many cases, excess emissions are evident when visible emissions are greater than 20% opacity for 3 minutes or more in any 60-minute period. If there is an ongoing excess emission caused by an upset or breakdown, the permittee must cease operation of the equipment or facility no later than 48 hours after the beginning of the excess emissions, unless continued operation is approved by the Department in accordance with OAR 340-214-0330(4).
- 5.3. Complaint Log** The permittee must maintain a log of all written complaints and complaints received via telephone that specifically refer to air pollution concerns associated to the permitted facility. The log must include a record of the permittee's actions to investigate the validity of each complaint and a record of actions taken for complaint resolution.
- 5.4. Retention of Records** Unless otherwise specified, all records must be maintained on site for a period of two (2) years and made available to the Department upon request.

6.0 REPORTING REQUIREMENTS

- 6.1. Excess Emissions** The permittee must notify the Department of excess emissions events if the excess emission is of a nature that could endanger public health.
- a. Such notice must be provided as soon as possible, but never more than one hour after becoming aware of the

problem. Notice must be made to the regional office identified in Condition 8.3 by e-mail, telephone, facsimile, or in person.

- b. If the excess emissions occur during non-business hours, the permittee must notify the Department by calling the Oregon Emergency Response System (OERS). The current number is 1-800-452-0311.
- c. The permittee must also submit follow-up reports when required by the Department.

6.2. Annual Report

For each year this permit is in effect, the permittee must submit to the Department by **February 15** two (2) copies of the following information for the previous calendar year:

- a. Operating parameters:
 - i. Tons of glass melted;
 - ii. Types and quantities of glass melted that contain arsenic;
 - iii. Summary of annual pollutant emissions determined each month in accordance with Condition 4.1, with annual totals noted;
 - iv. Results of the calculations required in Condition 2.1.
- b. Records of all planned and unplanned excess emissions events.
- c. Summary of complaints relating to air quality received by permittee during the year.
- d. List permanent changes made in plant process, production levels, and pollution control equipment which affected air contaminant emissions.
- e. List major maintenance performed on pollution control equipment.

6.3. Notice of Change of Ownership or Company Name

The permittee must notify the Department in writing using a Departmental "Permit Application Form" within 60 days after the following:

- a. Legal change of the name of the company as registered with the Corporations Division of the State of Oregon; or
- b. Sale or exchange of the activity, or facility.

- 6.4. Construction or Modification Notices**
- The permittee must notify the Department in writing using a Departmental "Notice of Construction Form," or "Permit Application Form," and obtain approval in accordance with OAR 340-210-0205 through 340-210-0250 before:
- a. Constructing, installing, or establishing a new stationary source that will cause an increase in any regulated pollutant emissions;
 - b. Making any physical change or change in operation of an existing stationary source that will cause an increase, on an hourly basis at full production, in any regulated pollutant emissions; or
 - c. Constructing or modifying any air pollution control equipment.

7.0 PERMIT RENEWAL AND MODIFICATION

- 7.1. Permit Renewal Application**
- The completed application package for renewal of this permit is due on 4/1/2015. Two (2) copies of the application must be submitted to the DEQ Permit Coordinator listed in Condition 8.2
- 7.2. Permit Modifications**
- Application for a modification of this permit must be submitted not less than **60** days prior to the source modification. A special activity fee must be submitted with an application for the permit modification. The fees and two (2) copies of the application must be submitted to the Business Office of the Department.

8.0 DEQ CONTACTS / ADDRESSES

- 8.1. Business Office**
- The permittee must submit payments for invoices, applications to modify the permit, and any other payments to DEQ's Business Office:

Department of Environmental Quality
Business Office
811 SW Sixth Avenue
Portland, Oregon 97204-1390

- 8.2. **Permit Coordinator** The permittee must submit all Notices and applications that do not include payment to the Northwest Region's Permit Coordinator:

Department of Environmental Quality
Northwest Region
2020 SW 4th Avenue, Suite 400
Portland, OR 97201-4987
Telephone: (503) 229-5582

- 8.3. **Field Office** Unless otherwise notified, the permittee must submit all reports (annual reports, source test plans and reports, etc.) to field office noted below.

Department of Environmental Quality
NWR-ESO/AQ
1550 NW Eastman Pkwy, Suite 290
Gresham, OR 97030
Telephone: (503) 667-8414

- 8.4. **Web Site** Information about air quality permits and the Department's regulations may be obtained from the DEQ web page at www.deq.state.or.us

9.0 FEES

- 9.1. **Annual Compliance Fee** The Annual Fee specified in OAR 340-216-0020, Table 2, Part 2 for a Standard ACDP is due on **December 1** of each year this permit is in effect. An invoice indicating the amount, as determined by Department regulations, will be mailed prior to the above date. **Late fees in accordance with Part 4 of the table will be assessed as appropriate.**

- 9.2. **Change of Ownership or Company Name Fee** The non-technical permit modification fee specified in OAR 340-216-0020, Table 2, Part 3(a) is due with an application for changing the ownership or the name of the company.

- 9.3. **Special Activity Fees** The special activity fees specified in OAR 340-216-0020, Table 2, Part 3 (b through i) are due with an application to modify the permit.

10.0 GENERAL CONDITIONS AND DISCLAIMERS

- | | |
|-------------------------------------|---|
| 10.1. Permitted Activities | This permit allows the permittee to discharge air contaminants from processes and activities related to the air contaminant source(s) listed on the first page of this permit until this permit expires, is modified, or is revoked. |
| 10.2. Other Regulations | In addition to the specific requirements listed in this permit, the permittee must comply with all other legal requirements enforceable by the Department. |
| 10.3. Conflicting Conditions | In any instance in which there is an apparent conflict relative to conditions in this permit, the most stringent conditions apply. |
| 10.4. Masking of Emissions | The permittee must not cause or permit the installation of any device or use any means designed to mask the emissions of an air contaminant that causes or is likely to cause detriment to health, safety, or welfare of any person or otherwise violate any other regulation or requirement. |
| 10.5. Department Access | The permittee must allow the Department's representatives access to the plant site and pertinent records at all reasonable times for the purposes of performing inspections, surveys, collecting samples, obtaining data, reviewing and copying air contaminant emissions discharge records and conducting all necessary functions related to this permit in accordance with ORS 468-095. |
| 10.6. Permit Availability | The permittee must have a copy of the permit available at the facility at all times. |
| 10.7. Open Burning | The permittee may not conduct any open burning except as allowed by OAR 340 Division 264. |
| 10.8. Asbestos | The permittee must comply with the asbestos abatement requirements in OAR 340, Division 248 for all activities involving asbestos-containing materials, including, but not limit to, demolition, renovation, repair, construction, and maintenance. |

10.9. Property Rights The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations.

10.10. Permit Expiration a. A source may not be operated after the expiration date of the permit, unless any of the following occur prior to the expiration date of the permit:

- i. a timely and complete application for renewal or for an Oregon Title V Operating Permit has been submitted, or
- ii. another type of permit (ACDP or Oregon Title V Operating Permit) has been issued authorizing operation of the source.

b. For a source operating under an ACDP or Oregon Title V Operating Permit, a requirement established in an earlier ACDP remains in effect notwithstanding expiration of the ACDP, unless the provision expires by its terms or unless the provision is modified or terminated according to the procedures used to establish the requirement initially.

10.11. Permit Termination, Revocation, or Modification The Department may modify or revoke this permit pursuant to OAR 340-216-0082 and 340-216-0084.

11.0 ABBREVIATIONS, ACRONYMS, AND DEFINITIONS

ACDP	Air Contaminant Discharge Permit	NSR	New Source Review
ASTM	American Society for Testing and Materials	O ₂	oxygen
AQMA	Air Quality Maintenance Area	OAR	Oregon Administrative Rules
calendar year	The 12-month period beginning January 1st and ending December 31st	ORS	Oregon Revised Statutes
CFR	Code of Federal Regulations	O&M	operation and maintenance
CO	carbon monoxide	Pb	lead
DEQ	Oregon Department of Environmental Quality	PCD	pollution control device
dscf	dry standard cubic foot	PM	particulate matter
EPA	US Environmental Protection Agency	PM ₁₀	particulate matter less than 10 microns in size
FCAA	Federal Clean Air Act	ppm	part per million
gal	gallon(s)	PSD	Prevention of Significant Deterioration
gr/dscf	grains per dry standard cubic foot	PSEL	Plant Site Emission Limit
HAP	Hazardous Air Pollutant as defined by OAR 340-244-0040	PTE	Potential to Emit
I&M	inspection and maintenance	RACT	Reasonably Available Control Technology
lb	pound(s)	scf	standard cubic foot
MMBtu	million British thermal units	SER	Significant Emission Rate
NA	not applicable	SIC	Standard Industrial Code
NESHAP	National Emissions Standards for Hazardous Air Pollutants	SIP	State Implementation Plan
NO _x	nitrogen oxides	SO ₂	sulfur dioxide
NSPS	New Source Performance Standard	Special Control Area	as defined in OAR 340-204-0070
		VE	visible emissions
		VOC	volatile organic compound
		year	A period consisting of any 12-consecutive calendar months

